

## PRACTICE EDITING TEXT

Be sure you are in the Atari Memo Pad Mode. That can be accomplished by removing the BASIC cartridge or by typing "BYE" if you are in BASIC. Copy the following text exactly as it is written. You will make corrections after you have finished typing the whole section. The letters and words that are underlined show you what changes need to be made. You will type them as regular letters or words, without the underlining. The 'x' shows where a word has been omitted. You should leave out the 'x' when you make corrections.

Color Register--The zpecific  
location in and computers memory  
that stores the colro you tell it to.

pEEK--A BASIC command that tells  
the computer to look into a specific  
location in the computer's memory  
and see what what is stored there.

POKE--A x command that tells  
the computer to put a new number into  
a specific location in the computer's  
memory.

Now you are ready to correct the paragraph. Use the guide on the next page to make the corrections. The idea is to help you learn to use as few keystrokes as possible, so you should not retype whole lines to correct mistakes. The corrected version below should help you to check your final copy.

### CORRECTED VERSION

Color Register--The specific  
location in the computer's memory  
that stores the color you tell it to.

PEEK--A BASIC command that tells  
the computer to look into a specific  
location in the computer's memory  
and see what is stored there.

POKE--A BASIC command that tells  
the computer to put a new number into  
a specific location in the computer's  
memory.

## CHALLENGES

Use FOR..NEXT loops to write a program (or programs) to solve one or more of the following problems.

1. Write a program to output one of the designs below. Print your name instead of the word NAME if you do the first one.

A. NAME  
NAME  
NAME  
NAME  
NAME  
NAME  
NAME

B.       #  
      ###  
     #####  
     #####  
     #####  
     #####  
     #####

C.       x  
      x x  
     x   x  
     x   x  
     x   x  
     x   x  
     x x  
      x

D.       XXXXX                   XXXXX  
         XXXXX               XXXXX  
             XXXXX       XXXXX  
                 XXXXX  
             XXXXX       XXXXX  
         XXXXX               XXXXX  
     XXXXX                   XXXXX  
XXXXX                               XXXXX

## CHALLENGES

(CONTINUED)

2. Write a program to print one of the number sequences.

A. First sequence:

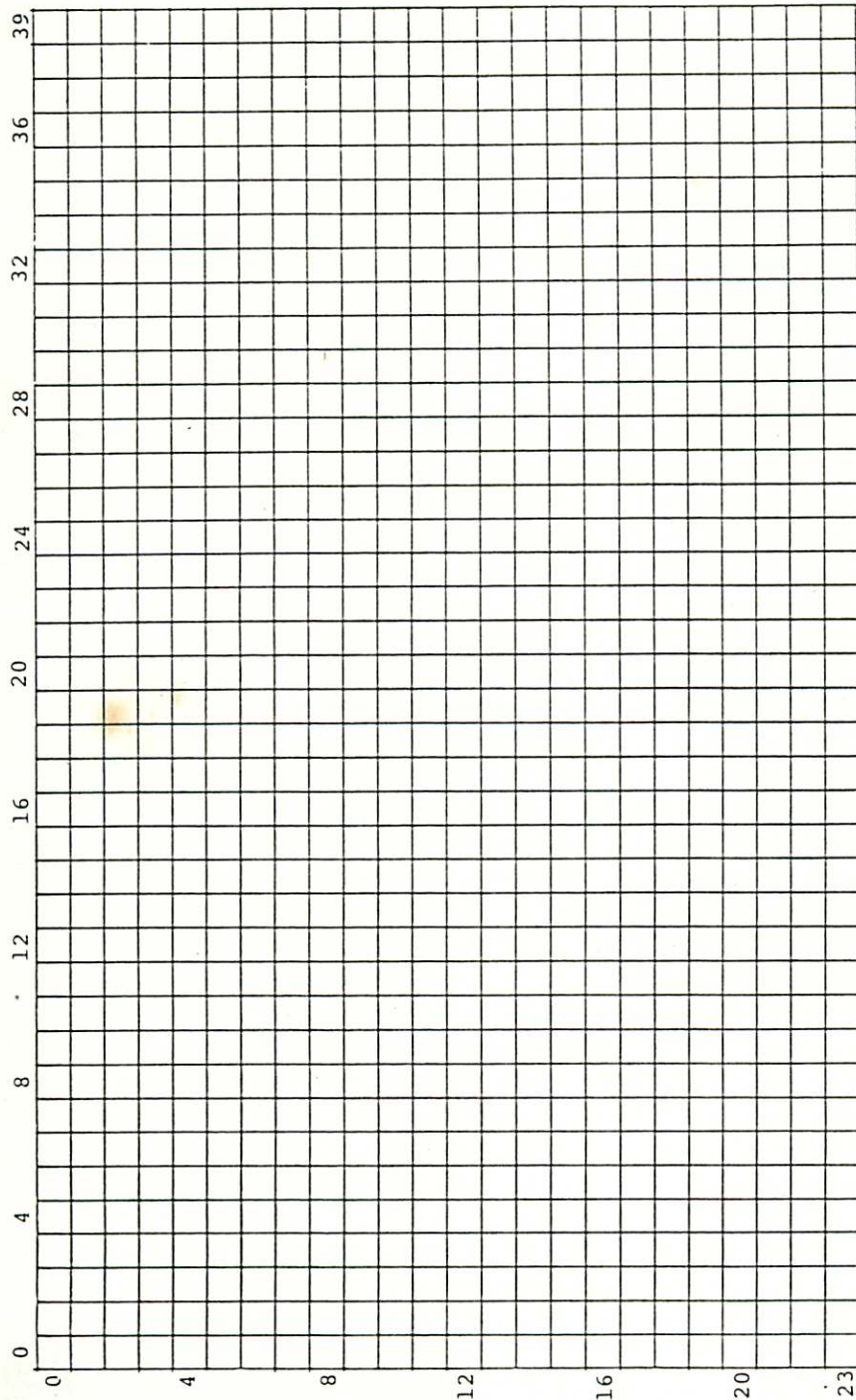
5    24    43    62    81    100

B. Second sequence:

3    40    77    114    151    188

3. Write a program that shows all the numbers between 1 and 100 that are divisible by 3. If you have time, change the program, so that a person can ask for all the numbers between two numbers that are divisible by a third number.

# Graphics Mode 0



Notes: \_\_\_\_\_

LOOPS  
FOR...NEXT  
(CAMPER COPY)

```
10 REM FOR...NEXT Introduction
20 FOR COUNT=1 TO 10
30 PRINT COUNT
40 NEXT COUNT
```

---

```
10 REM Printing lots of letters.
20 FOR NUMTIMES=1 TO 400
30 PRINT "Z-";
40 NEXT NUMTIMES
50 PRINT "WOOPS! TIME TO WAKE UP."
```

---

```
10 REM Using variables and limits
20 START=1
30 FOR NUM=START TO 10
40 PRINT NUM
50 NEXT NUM
```

---

```
10 REM Dangerous and improper
15 REM use of a variable
20 FOR COUNTER=1 TO 25
30 COUNTER=COUNTER+1
40 PRINT COUNTER
50 NEXT COUNTER
```

---

```
10 REM Illustration of a Delay Loop
20 PRINT "Please wait a moment."
30 FOR WAIT=1 TO 3000:NEXT WAIT
40 PRINT "Thank you for waiting."
```

LOOPS  
FOR...NEXT STEP  
(CAMPER COPY)

```
10 REM Illustrating STEP
20 FOR COUNT=1 TO 20 STEP 2
30 PRINT COUNT
40 NEXT COUNT
```

Add line 15 and change line 20.

```
15 NUMSTEP=4
20 FOR COUNT=1 TO 40 STEP NUM
```

---

```
10 REM Using variables with STEP and FOR...NEXT
20 PRINT "By what number would you like to"
30 PRINT "count?";
40 INPUT COUNTRY
50 PRINT "Let me think..."
60 FOR WAIT=1 TO 3000:NEXT WAIT
70 PRINT "OK. I will count by ";COUNTRY
80 FOR COUNTER=0 TO 50 STEP COUNTRY
90 PRINT COUNTER
100 NEXT COUNTER
```

---

```
10 REM A program to count backwards
20 PRINT "5":REM Clears screen
30 "XXXCOUNTING BACKWARDSXXX":PRINT
40 PRINT "Please give me a number"
50 PRINT "between 2 and 100. ";
60 INPUT NUM:PRINT
70 PRINT "Counting backwards can be fun."
80 PRINT "Starting with ";NUM;" and ending with
  1.":PRINT
90 FOR WAIT=1 TO 1000:NEXT WAIT:REM Delay loop to
  allow time to read
100 FOR COUNTER=NUM TO 1 STEP -1
110 PRINT COUNTER;" ";
120 NEXT COUNTER
130 PRINT :PRINT:REM Advances before starting the
  program again.
140 GOTO 40:REM Ask for another input
```

---

```
10 REM Sound demo of STEP
20 FOR PITCH=0 TO 255 STEP 1
30 SOUND 0,PITCH,10,10
40 NEXT PITCH
50 FOR PITCH=255 TO 0 STEP -1
60 SOUND 0,PITCH,10,10
70 NEXT PITCH
```

## NESTED LOOPS (CAMPER COPY)

```
10 REM Demonstration of nested loops.
20 FOR OUTERLOOP=1 TO 5
30 PRINT "OUTERLOOP = ";OUTERLOOP
40 FOR INNERLOOP=1 TO 3
50 PRINT "    INNERLOOP = ";INNERLOOP
60 NEXT INNERLOOP
70 PRINT
80 NEXT OUTERLOOP
```

Change the values in lines 20 and 40 to:

```
20 FOR OUTERLOOP=1 TO 3
40 FOR INNERLOOP=1 TO 5
```

and then predict what the output will be before you run the program.

-----

```
10 REM Printing stars
20 FOR NUMDOWN=1 TO 10
30 FOR NUMACROSS=1 TO 10
40 PRINT "*";
50 NEXT NUMACROSS
60 PRINT
70 NEXT NUMDOWN
```

Change the values in lines 20 and 30, so that the program makes one of the boxes below:

XX	XXXXXXXXXX	XXXXXXXXXX
XX	XXXXXXXXXX	XXXXXXXXXX
XX	XXXXXXXXXX	XXXXXXXXXX
XX		XXXXXXXXXX
XX		XXXXXXXXXX
XX		XXXXXXXXXX

- 1. 1964
- 2. 1964
- 3. 1964
- 4. 1964
- 5. 1964
- 6. 1964
- 7. 1964
- 8. 1964
- 9. 1964
- 10. 1964

1964

- 1. 1964
- 2. 1964
- 3. 1964
- 4. 1964
- 5. 1964
- 6. 1964
- 7. 1964
- 8. 1964
- 9. 1964
- 10. 1964

1964

1964

1964

- 1. 1964
- 2. 1964
- 3. 1964
- 4. 1964
- 5. 1964
- 6. 1964
- 7. 1964
- 8. 1964
- 9. 1964
- 10. 1964

1964

1964

- 1. 1964
- 2. 1964
- 3. 1964
- 4. 1964
- 5. 1964
- 6. 1964
- 7. 1964
- 8. 1964
- 9. 1964
- 10. 1964

1964



## NESTED LOOPS (CAMPER COPY - CONTINUED)

```
10 REM A triangle of stars
20 FOR ROW=1 TO 10
30 FOR STARS=1 TO ROW
40 PRINT "*";
50 NEXT STARS
60 PRINT
70 NEXT ROW
```

Change the program, so that the triangle is turned upside down like this:

```
*****
*****
*****
****
***
**
*
```

---

```
10 REM Moving indenting before printing.
20 PRINT "␣":REM Clear screen.
30 PRINT "INDENT"
40 FOR INDENT=1 TO 10
50 FOR SPACES=1 TO INDENT
60 PRINT " ";
70 NEXT SPACES
80 PRINT "INDENT"
90 NEXT INDENT
```

---

```
10 REM Combining color and sound
20 PRINT "␣":REM Clear screen
30 FOR COUNTER=1 TO 5
40 FOR COLORPITCH=50 TO 150
50 POKE 710,COLORPITCH:REM Changes screen color
60 SOUND 0,COLORPITCH,10,6
70 FOR WAIT=1 TO 10
80 NEXT WAIT
90 NEXT COLORPITCH
100 NEXT COUNTER
```

MEETING LOGS  
CHAPTER 10: CONTINUED

1. The first meeting of the  
2. The second meeting of the  
3. The third meeting of the  
4. The fourth meeting of the  
5. The fifth meeting of the  
6. The sixth meeting of the  
7. The seventh meeting of the  
8. The eighth meeting of the  
9. The ninth meeting of the  
10. The tenth meeting of the  
11. The eleventh meeting of the  
12. The twelfth meeting of the  
13. The thirteenth meeting of the  
14. The fourteenth meeting of the  
15. The fifteenth meeting of the  
16. The sixteenth meeting of the  
17. The seventeenth meeting of the  
18. The eighteenth meeting of the  
19. The nineteenth meeting of the  
20. The twentieth meeting of the

21. The twenty-first meeting of the  
22. The twenty-second meeting of the  
23. The twenty-third meeting of the  
24. The twenty-fourth meeting of the  
25. The twenty-fifth meeting of the  
26. The twenty-sixth meeting of the  
27. The twenty-seventh meeting of the  
28. The twenty-eighth meeting of the  
29. The twenty-ninth meeting of the  
30. The thirtieth meeting of the  
31. The thirty-first meeting of the  
32. The thirty-second meeting of the  
33. The thirty-third meeting of the  
34. The thirty-fourth meeting of the  
35. The thirty-fifth meeting of the  
36. The thirty-sixth meeting of the  
37. The thirty-seventh meeting of the  
38. The thirty-eighth meeting of the  
39. The thirty-ninth meeting of the  
40. The fortieth meeting of the

41. The forty-first meeting of the  
42. The forty-second meeting of the  
43. The forty-third meeting of the  
44. The forty-fourth meeting of the  
45. The forty-fifth meeting of the  
46. The forty-sixth meeting of the  
47. The forty-seventh meeting of the  
48. The forty-eighth meeting of the  
49. The forty-ninth meeting of the  
50. The fiftieth meeting of the  
51. The fifty-first meeting of the  
52. The fifty-second meeting of the  
53. The fifty-third meeting of the  
54. The fifty-fourth meeting of the  
55. The fifty-fifth meeting of the  
56. The fifty-sixth meeting of the  
57. The fifty-seventh meeting of the  
58. The fifty-eighth meeting of the  
59. The fifty-ninth meeting of the  
60. The sixtieth meeting of the

GOTO  
(CAMPER COPY)

```
10 REM The Allowance Con
20 REM Ask for an allowance in a
30 REM different way. Ask for 1 cent
40 REM the first week. Then ask that
50 REM the amount be doubled each week.
60 REM The program shows you how much you
70 REM would earn each week.
80 PRINT " ";REM Clear screen
90 WEEK=1:ALLOWANCE=1
100 PRINT "WEEK #";WEEK
110 PRINT "ALLOWANCE = $";ALLOWANCE/100
120 PRINT
130 ALLOWANCE=ALLOWANCE*2
150 WEEK=WEEK+1
210 GOTO 100
```